



Office for Nuclear Regulation (ONR) Site Report for Sizewell B Power Station

Report for period 1 October 2018 – 31 December 2018

Foreword

This report is issued as part of ONR's commitment to make information about inspection and regulatory activities relating to the above site available to the public. Reports are distributed to members for the Sizewell Site Stakeholder Group and are also available on the ONR website (<http://www.onr.org.uk/llc/>).

Site inspectors from ONR usually attend Sizewell Site Stakeholder Group meetings where these reports are presented and will respond to any questions raised there. Any person wishing to enquire about matters covered by this report should contact ONR.

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1 INSPECTIONS

1.1 Dates of inspection

ONR inspectors undertook interventions at Sizewell B Power Station on the following dates during the reporting period:

- 9 – 12 October 2018
- 8 – 9 November 2018
- 19 – 23 November 2018
- 12 – 13 December 2018

2 ROUTINE MATTERS

2.1 Inspections

Inspections are undertaken as part of the process for monitoring compliance with:

- the conditions attached by ONR to the nuclear site licence granted under the Nuclear Installations Act 1965 (NIA65) (as amended);
- the Energy Act 2013
- the Health and Safety at Work Act 1974 (HSWA74); and
- regulations made under HSWA74, for example the Ionising Radiations Regulations 2017 (IRR17) and the Management of Health and Safety at Work Regulations 1999 (MHSWR99).

The inspections entail monitoring the licensee's (EDF Energy Nuclear Generation Ltd (NGL)) actions on the site in relation to incidents, operations, maintenance, projects, modifications, safety case changes and any other matters that may affect safety. The licensee is required to make and implement adequate arrangements under the conditions attached to the licence in order to ensure legal compliance. Inspections seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections covered the following topics:

- Organisational capability
- Safety case management
- Emergency arrangements
- Incidents on site

In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate in the areas inspected. However, where improvements were considered necessary, the licensee made satisfactory commitments to address the issues, and the site inspector will monitor progress during future visits. Where necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales.

Our organisational capability inspection evaluated the adequacy of the station's nuclear baseline. The nuclear baseline is a suite of documentation by which the licensee demonstrates that its organisational structure, staffing and competencies are suitable and sufficient to maintain nuclear safety on the site. Based on a sample of interviews, observations and document reviews we judged that Sizewell B has effective managerial processes in place to manage, monitor and secure the human resources and competencies required to maintain nuclear safety on the site. We identified a minor shortfall in relation to the station's nuclear baseline, concluded that further development of this documentation was necessary to meet relevant good practice. An inspection conducted at another NGL site made similar findings. We have therefore written to NGL seeking improvement of nuclear baseline documentation across its fleet and raised an entry on ONR's Issues Database to track resolution of this issue. Notwithstanding this finding, we judged that overall NGL was managing its human resources adequately and have therefore assigned a rating of Green (no further action required) against licence condition 36 (Organisational and Financial Capability).

The principal focus of our safety case management inspection was to evaluate implementation of arrangements made under license condition 14 to deal with safety case anomalies. We were satisfied that NGL have developed and implemented a graded approach for the production of documentation assessing the impact of such anomalies. No significant non-shortfalls were identified. A Green inspection rating was awarded against licence condition 14.

2.1.1 System Based Inspections

In addition to our program of site licence compliance inspections, ONR also undertakes system based inspections (SBI) which are focused on the station's critical safety systems and structures and are derived from the licensee's safety cases. During the period, ONR performed a system based inspection of the following system:

- SBI19 – Essential Power Systems

The safety function of the essential power system is to provide a reliable, on demand, power supply for essential post trip safety systems. The system includes post trip load shedding and sequencing equipment, uninterruptable power supply (UPS) systems, and electrical supply systems (at 415 and 110 V). The objective of the SBI was to evaluate the implementation of safety case claims on this equipment via inspections performed under the following site licence conditions:

- Licence condition 10: Training
- Licence condition 23: Operating rules
- Licence condition 24: Operating instructions
- Licence condition 27: Safety mechanisms
- Licence condition 28: Examination, inspection, maintenance and testing

After considering the evidence examined during the inspection we judged that the essential power systems met the requirements of the associated safety case. We awarded **Green** inspection against the above licence conditions: LC10, LC23, LC24, LC27 and LC28.

2.2 Other work

In November, ONR inspectors met with NGL staff to review the scope of the station's 16th refuelling outage (RO16), scheduled to commence in May 2019. The scope of work presented met with ONR's expectations. ONR will use the information presented to develop programme for regulatory oversight of the outage, targeting key safety related activities.

3 NON-ROUTINE MATTERS

In November, the Deputy Chief Inspector visited the site, meeting with members of the station's leadership team and work force safety representatives. During the visit inspectors undertook a tour of the station to review progress against issues on the ONR's database. Overall, we are satisfied with progress being made.

4 REGULATORY ACTIVITY

ONR may issue formal documents to ensure compliance with regulatory requirements. Under nuclear site licence conditions, ONR issues regulatory documents, which either permit an activity or require some form of action to be taken; these are usually collectively termed 'Licence Instruments' (LIs), but can take other forms. In addition, inspectors may take a range of enforcement actions, to include issuing an Enforcement Notice.

- No LIs, Enforcement Notices or Enforcement letters were issued during this period.

5 NEWS FROM ONR

October

We welcomed the [publication](#) of the key review of operational safety performance at Torness nuclear power station, published by the International Atomic Energy Agency and the UK government. The report highlights eight areas of good practice at Torness and offers proposals for further improvements, which we fully support.

Following our decision to prosecute, EDF Energy Nuclear Generation Ltd and Doosan Babcock Ltd pleaded guilty to offences at Hinkley Point B under the Health & Safety at Work etc. Act 1974, section 3(1) and the Work at Height Regulations 2005, Regulation 4(1) respectively. The incident was a conventional health and safety matter, with no radiological risk to workers or the public. [A sentencing date](#) has been set for 1 February 2019 at Taunton Crown Court.

On 1 February 2019 EDF Energy were fined £200,000 and Doosan Babcock £150,000. The companies were also ordered to each pay half of the prosecution costs of £36,353.84.

The sentencing marks the conclusion of a prosecution brought by ONR for offences under the Health & Safety at Work etc. Act 1974, section 3(1), (in relation to EDF Energy), and the Work at Height Regulations 2005, Regulation 4(1), (for Doosan Babcock).

The full [press statement](#) is available on our website.

November

Following a rigorous procurement process, we appointed six nuclear supply chain organisations to our new [Technical Support Framework \(TSF\)](#). The new TSF, which came in to effect on 1 November 2018, has been established to provide a renewed and modernised framework for procuring technical support. We use this technical support to obtain, for example, expert technical assessments, access to specialist software or modelling, or access to niche skill sets that we do not retain in-house.

The revised Nuclear Safety Directive introduced a European system of Topical Peer Review in 2017 and every six years thereafter. We played a leading role in the preparations for the first European 'Topical Peer Review' on Ageing Management of Nuclear Power Plants and welcome the publication of the [first peer review report](#) by

the European Nuclear Safety Regulator Group. We are pleased that a number of our experts made a valuable contribution to the exercise alongside 16 European countries as well as Norway, Switzerland and Ukraine. The UK report was authored jointly between ourselves, EDF Nuclear Generation Ltd and EDF-NNB GenCo.

[The Atomic Weapons Establishment \(AWE\) was fined £1 million](#) after admitting offences under Section 2 (1) of the Health and Safety at Work etc. Act (1974). The incident, which occurred on 27 June 2017 was a conventional health and safety matter and there was no radiological risk to workers or the public. The prosecution was the result of our investigation into the incident.

In conjunction with the Environment Agency, we announced the completion of our [initial high level scrutiny](#) of the UK HPR1000 reactor design.

We provided NNB Genco (HPC) Ltd (NNB GenCo) with [consent](#) to commence the unit 1 Nuclear Island concrete pour at Hinkley Point C (HPC). We also hosted our third webinar to explain our permissioning role for the Nuclear Island concrete pour at HPC and to provide information on our work to ensure that the new nuclear power station is built to the standards expected in the UK. Amongst others, a number of Site Stakeholder Group members joined the webinar and we received excellent feedback. We are planning further webinars on various topics in 2019. If you would like to find out more, please contact the ONR Communications team at contact@onr.gov.uk

After 16 years of decommissioning work, Bradwell became the first of the Magnox nuclear power stations to receive our permission to enter into a period of “care and maintenance”.

The nuclear safeguards regulations which will enable ONR to set up the domestic safeguards regime following Euratom withdrawal, were laid in Parliament. The Government published the details, [alongside its response and the feedback to consultation on the draft regulations on its website.](#)

December:

[Court proceedings continued](#) in our [prosecution of Sellafield Ltd](#) for offences under Section 2 (1) of the Health and Safety at Work etc Act (1974).

Reactor 3 at Hunterston B remains offline after being shut down following a routine inspection into cracks in its graphite core, in March 2018. [Cracking of the graphite bricks in Advanced Gas-cooled Reactors](#) such as Hunterston B is expected as the reactors age. However, the number of cracks found during the inspection of Reactor 3 has led to the licensee, EDF Nuclear Generation Limited, carrying out further inspections of the core. Reactor 4 at Hunterston B was taken offline in October for an inspection of its graphite core. EDF Energy has submitted a safety case for Reactor 4 and is preparing one for Reactor 3. We will assess both safety cases to determine whether the reactors are safe to return to service. Neither reactor may restart without our consent, which we will give only if it is safe to do so.

The Government published a [Written Ministerial Statement](#) on implementing Geological Disposal, announcing the publication of its [Working With Communities](#) policy and the launch of a consent-based process to find a site to host a Geological

Disposal Facility (GDF). While we have no formal role in identifying the site for a GDF, any future facility will need to meet the high standards of safety and security required of a licensed nuclear site.

All our latest news is available on our website www.onr.org.uk

6 CONTACTS

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Published 08/19

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